A PROPOSAL FOR AN INTEROPERABLE LAND INFORMATION SYSTEM FOR NEBRASKA

September 2003

NEBRASKA
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The Nebraska Land Records Modernization Study was completed in August 2003 by GeoAnalytics and the Nebraska Geographic Information Systems Steering Committee

GeoAnalytics®

Nebraska Land Records Modernization Study

1. Purpose

The Nebraska Geographic Information Systems Steering Committee has conducted a study with the intent of outlining a recommended long-range plan / model for developing and maintaining a statewide digital geospatial cadastre including land ownership records, mapping layers, and core attributes. This effort, the *Nebraska Land Records Modernization Study*, was completed in August 2003.

2. Approach

The Study involved four activities:

• **A review of leading statewide institutional models for land records modernization.** This effort has provided valuable information by identifying both "best practices" and "lessons learned" from a representative sample of states who have undertaken similar programs.

• **An assessment of the current situation including the status and need for land records modernization.** This assessment included both a comprehensive survey of local governments and interviews with key stakeholders at the state level.

• **The development of a conceptual design for a land information program.** This conceptual design provided a vision for a land information program that takes into account both the technical and policy dimensions, and business processes, data, technology, and organizational matters to create a broad system architecture.

• **The creation of a plan to help the State realize their vision of a land information program for Nebraska.** This plan is both strategic—laying out a game plan to attain the vision—and tactical—defining a number of specific actions to achieve the goal.

3. Findings

The *Nebraska Land Records Modernization Survey 2003* found, with some notable exceptions, that most local governments in the State have yet to adopt modern technologies for the management and maintenance of land records and both spatial (map) and non-spatial (database) related data. Key findings include:

• Only 21% of Nebraska counties use and maintain parcel mapping in computerized form

• Local government spends $1.9 million or more annually for parcel map maintenance and updates

• Because so much of the parcel data is maintained manually, the usefulness of that information is questionable (e.g. the average vintage of cadastral data is 1981--some is as old as 1940)

• 86% of Nebraska Counties indicate their update cycle for parcel mapping is greater than 10 years

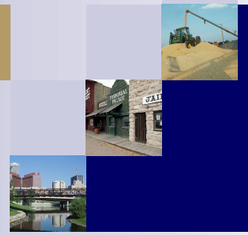
• The cost for major revisions to parcel map information range to $1.6 million statewide—a cost that could be largely avoided if parcel maps were maintained digitally

• Because hardcopy land records are difficult to access, aggregate, and analyze, the need for automated data extends beyond parcel maps to a variety of spatial and non-spatial data that is regularly used by local, regional, and state governments, the private sector, citizens, and the academic community

• Local governments spend upwards of $2 million for the creation, development, and distribution of GIS data

• Maintenance of the Public Land Survey System costs local governments $700,000 or more annually

"The cost for major revisions to parcel map information range to $1.6 million statewide - a cost that could be largely avoided if parcel maps were maintained digitally"



"In the end, the systems that are developed must strengthen and enhance the business and governance of participating agencies and their clients"

3. Findings

continued

Positives to Build On

The study found that there are many positives upon which to build modern land information systems:

• Virtually all of those agencies surveyed have access to information technology. 93% of counties and 100% of cities surveyed reported that they had some form of Internet access.

• There is a statewide data communications network that extends to every county in the State (the "AS400 Network") with connections ranging from 56k to T1. There are also several other, though less pervasive, networks available.

The State has an established, solid geographic framework composed of:

• **Statewide Digital Orthophotography.** While not suitable for all purposes, these orthophotos provide a consistent geographically referenced base map that meets many, if not most, state and local business purposes.

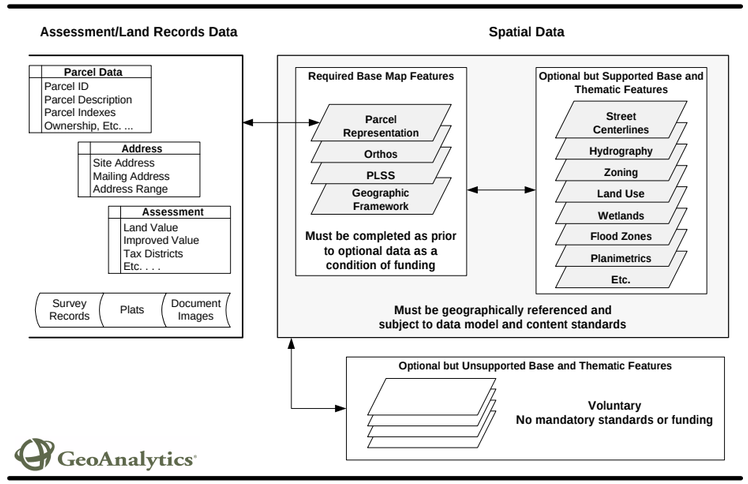
• **The Nebraska High Accuracy Reference Network (HARN).** It offers more than 200 geodetic quality control stations acquired using GPS survey methods. These HARN stations may be used by local surveyors, engineers, photogrammetrists, and others to support mapping, Public Land Survey System (PLSS) updates and maintenance, and geodetic control densification.

A Proposal for a Land Information System Program for Nebraska

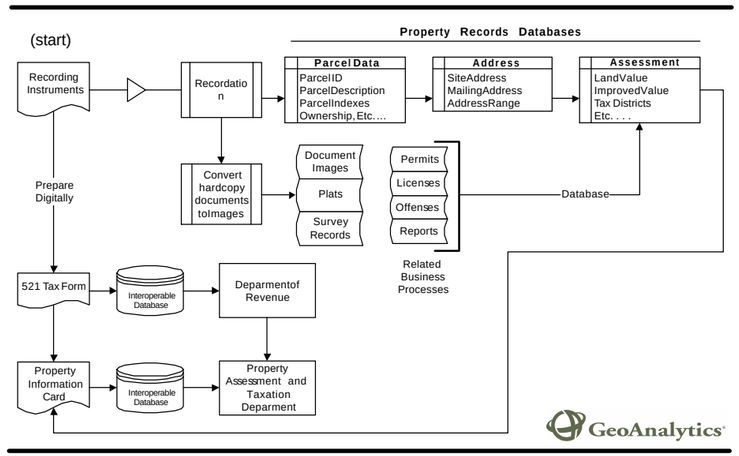
This proposal seeks to bring about land records modernization on two fronts.

First, the Nebraska Geographic Information Systems Steering Committee will work with local governments to develop an automated, parcel based land information system to be analytical and geographically referenced to support mapping, information, and business systems needs.

Second, the Nebraska Department of Property Assessment and Taxation will work with local governments to build a statewide interoperable assessment database and system to automate a variety of non-spatial land records, including ownership and assessment databases and related conveyance and land management documents.



A Conceptual Design for a Land Information System



Example of Workflow for a Statewide Assessment and Land Records Database

Program Strategies

These interdependent efforts will provide program participants with a rich and functional framework to build their own geographic and land information systems. This program has five strategic objectives:

1. Focus on Missions and Mandates.
In the end, the systems that are developed must strengthen and enhance the business and governance of participating agencies and their clients.

2. Information System Perspective.
While maps and spatial data are essential components, the goal is to create information systems that are interoperable to support a multitude of business functions and activities.

3. Multi-Purpose, Multi-Participant.
Systems must meet the needs of their sponsors and those of affiliated agencies and stakeholders.

4. Statewide Scope, Decentralized Operations.
While the system will ultimately be statewide in scope, it will be developed and operated in a decentralized fashion in order to maintain local control.

5. Efficiency and Effectiveness.
The program will emphasize automation, business process improvement, and coordination to enhance the efficiency and effectiveness of governments in Nebraska.

Program Features

Voluntary and Locally Driven.
Local governments will be able to opt in or out and may take charge of their own systems development and operations

Incentive-Based Policies.
Participants in the program will be entitled to financial and other incentives if they adhere to program requirements

Standards Based.
Technical program requirements will be based on "best practices" standards. Projects and products will be flexible to meet the needs of newcomers to modernization as well as those who have already made investments.

Coordination, Collaboration, and Regionalization.
Program incentives will be directed to those efforts that will benefit multiple agencies and jurisdictions through automation, business process improvement and coordination. Regionalization of program and system development, particularly in rural areas, will be encouraged.

Technical Assistance.
Part of the incentive for program participation will come in the form of technical assistance from the State. Technical assistance may include template specifications, project assistance or management, and education.